UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

April 14, 2014

Superintendent, Mike Murray
Fort Raleigh National Historic Site
General Management Plan
1401 National Park Drive
Manteo, NC 27954

RE: Final General Management Plan/Environmental Impact Statement Fort Raleigh National Historic Site
CEQ Number: 20140072

Dear Mr. Murray:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the subject Final General Management Plan/Environmental Impact Statement Fort Raleigh National Historic Site. The National Park Service (NPS) is the lead agency for this DEIS.

General management plans are long-range planning documents that establish and articulate a management philosophy and framework for decision making and problem solving in the parks. Fort Raleigh National Historic Site's last planning effort was completed in 1964, however this Master Plan was not prepared in conformance with the requirements of the National Parks and Recreation Act of 1978 and current management policies and guidelines. Since the 1964 Master Plan, the boundary of Fort Raleigh National Historic Site has expanded as well as the interpretive mission that includes people and individual's whose lives and lifestyles span more than 420 years. Guidance is needed to provide management direction and address issues associated with the national historic site's expanded boundary and themes. This general management plan provides management direction for the park for the next 15 to 20 years.

ALTERNATIVES

The NPS developed all alternatives with substantial public, interagency, and NPS staff participation. Three alternatives have been developed for managing visitor use and resources at Fort Raleigh National Historic Site. Each alternative provides a different management approach. The alternatives were based on the park's purpose and significance, legal mandates, public

views, and information on visitor use and park resources. The alternatives are: Alternative A – the No-action Alternative, Alternative B, and Alternative C (NPS Preferred Alternative).

ALTERNATIVE A: NO-ACTION / CONTINUE CURRENT MANAGEMENT

Alternative A is the continuation of current management actions and direction into the future; continuing with the present course of action until that action is changed. "No-action" represents how the national historic site would continue to manage natural resources, cultural resources, and visitor use and experience if a new general management plan was not approved and implemented.

ALTERNATIVE B

Under Alternative B, the national historic site would:

*Emphasize a greater reliance (than under current conditions) on partnerships, cooperative agreements, and on-site visitor facilities and services to accomplish interpretation of the Roanoke Voyages. NPS interpretive focus would be on the national historic site's other stories (Carolina Algonquians, Civil War, Freedmen's Colony, Fessenden experiments).

*Provide orientation to the national historic site.

*Evaluate the feasibility of an expanded campus (new Roanoke Island Historical Association [partner]-funded visitor center/indoor theater could be built near the current NPS visitor center) for partner-funded interpretation of the Roanoke Voyages and *The Lost Colony* outdoor symphonic drama.

*The NPS would also address compliance requirements for ground disturbing projects such as trails work, vegetation plantings, expansion of parking at headquarters (eight spaces), outdoor seating area, signage and waysides, and removal of the Prince and Beehive houses.

Under Alternative B the national historic site would:

*Rely more upon Roanoke Island Historical Association to tell the story of the Roanoke Voyages. The NPS would interpret other national historic site stories, including Carolina Algonquians, Freedmen's Colony, Civil War, and Fessenden radio experiments.

*Provide self-guided interpretive opportunities using existing trails.

*Explore the use of the NPS Arts-in-Parks program. This program is offered in various parks across the country and invites visitors to experience the wonder of the park in combination with the wonder of the arts.

Many of the features of Alternative B would be the same as those already described for Alternative A.

ALTERNATIVE C (NPS PREFERRED ALTERNATIVE)

Alternative C would emphasize Section 3 of Public Law 101-603 which states that the "Secretary, in consultation with scholarly and other historic organizations, shall undertake research on the history and archeology of the national historic site, and the associated people and events." The national historic site would accomplish this by increasing emphasis on research related to interpretive themes and legislative mandates. By coordinating and expanding efforts with research organizations and agencies, visitors would benefit by gaining increased knowledge of the national historic site and its multiple themes, both cultural and natural.

Under Alternative C, the national historic site would:

*Enhance its partnership with the First Colony Foundation, a North Carolina 501(c) (3) non-profit organization dedicated to conducting archeological and historical research, combined with public education and interpretation. The First Colony Foundation is focused on research and education relating to the story of North Carolina and America's beginnings with the attempts by Sir Walter Raleigh to establish English colonies at Roanoke Island in the 1580s under his charter from Queen Elizabeth I (First Colony Foundation website 2011).

*Establish partnerships with organizations that focus on natural and cultural resource topics.

*Include archeology as a significant aspect of the research program at the national historic site.

*Maintain the current visitor center as the primary visitor orientation facility.

*Implement NPS researcher-in-the-park program.

*Promote increased research use of collections at the Museum Resource Center.

*Increase research efforts with regard to the effects of climate change on natural and cultural resources in the national historic site.

Many of the features of Alternative C would be the same as those already described for Alternative A or Alternative B.

EPA's COMMENTS

EPA appreciates the opportunity to review this document and would like to provide the following comments.

Generally speaking, this document provides very good discussions of sea-level rise, shoreline erosion, invasive species and historic resources (history, present and future uses). Based on Alternative C analysis and conclusions, impacts to wetlands appear to be relatively

minor. Past trends indicate a leveling of visitation and the NPS does not expect visitation to increase. There is no basis to estimate a particular amount of increase. The GMP calls for only limited new facilities, and instead formalizes visitor activities already occurring at the national historic site, providing a safe visitor experience.

The actions proposed in the GMP are not expected to alter or impact utilities. By connecting to the county's water supply, the availability of the public drinking water is secured for the future. Based on the level of water use, visitors are not expected to exceed the capacity of the county facilities, as visitors are already taken into consideration as part of the normal seasonal population this area experiences. Regarding refuse collection and disposal and waste recycling and reuse, the systems in place are adequate to handle visitation rates.

In the spirit of collaboration and technical assistance the EPA recommends some sustainability concepts which could be considered in the final management plan.

Green Building

Green building is the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle from design to, construction, operation, maintenance, renovation and deconstruction. This practice expands and complements the classical building design concerns of economy, utility, durability, and comfort. Green building is also known as a sustainable or high performance building.

Green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by:

- Efficiently using energy, water, and other resources
- Protecting occupant health and improving employee productivity
- Reducing waste, pollution and environmental degradation

For example, green buildings may incorporate sustainable materials in their construction (e.g., reused, recycled-content, or made from renewable resources); create healthy indoor environments with minimal pollutants (e.g., reduced product emissions); and/or feature landscaping that reduces water usage (e.g., by using native plants that survive without extra watering).

In the United States, buildings account for:

- 39 percent of total energy use
- 12 percent of the total water consumption
- 68 percent of total electricity consumption
- 38 percent of the carbon dioxide emissions

Potential benefits of green building can include:

Environmental benefits

Enhance and protect biodiversity and ecosystems
Improve air and water quality
Reduce waste streams
Conserve and restore natural resources

Economic benefits

Reduce operating costs
Create, expand, and shape markets for green product and services
Improve occupant productivity
Optimize life-cycle economic performance

Social benefits

Enhance occupant comfort and health
Heighten aesthetic qualities
Minimize strain on local infrastructure

Green Parking

Green parking refers to several techniques that when applied together reduce the contribution of parking lots to total impervious cover. From a storm water perspective, green parking techniques applied in the right combination can dramatically reduce impervious cover and, consequently, reduce the amount of storm water runoff. Green parking lot techniques include: setting minimums of permanent parking spaces; minimizing the dimensions of parking lot spaces; utilizing alternative pavers in overflow parking areas; using bioretention areas to treat storm water; encouraging shared parking.

Green parking lots can dramatically reduce the creation of new impervious cover. How much is reduced depends on the combination of techniques used to achieve the greenest parking. While the pollutant removal rates of bioretention areas have not been directly measured, their capability is considered comparable to a dry swale, which removes 91 percent of total suspended solids, 67 percent of total phosphorous, 92 percent of total nitrogen, and 80-90 percent of metals (Claytor and Schueler, 1996).

North Carolina's Fort Bragg vehicle maintenance facility parking lot is an excellent example of the benefits of rethinking parking lot design (NRDC, 1999). The redesign incorporated storm water management features, such as detention basins located within grassed islands, and an onsite drainage system that exploited existing sandy soils. The redesign reduced impervious cover by 40 percent, increased parking by 20 percent, and saved 20 percent or $1.6 million on construction costs over the original, conventional design.

Briefly three other sustainable activities which may applicable to the Park Service's general management plan are as follows:

- **Green Detention Ponds**
- **Rain Water Harvesting**
- **Rain Gardens**

CONCLUSION

EPA appreciates the effort and planning put into this Final General Management Plan. This document provides very good discussions of sea-level rise, shoreline erosion, invasive species and historic resources (history, present and future uses). Based on the available information, we concur with NPS that Alternative C would appear to be the best approach.

We appreciate the opportunity to review the proposed action. Please contact Ken Clark at (404) 562-8282 if you have any questions or want to discuss our comments.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Environmental Accountability